

INSTITUTE OF CANCER RESEARCH: ROYAL CANCER HOSPITAL

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Dr. J. Lederberg,  
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Stanford,  
California 94305,  
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Dear Dr. Lederberg,

As you may know, Professor Sir Tom Symington hopes to visit Stanford University towards the end of this month and to see you during his visit. He has asked me to send on to you a copy of a paper which he has recently written, and I am enclosing it herewith.

Yours sincerely,

*A.W. Allan*

Secretary

*CC: Brodwin  
H. Zuckerman*

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Symington, T.

## CANCER: A CHALLENGE TO CLINICIANS AND BIOMEDICAL SCIENTISTS

T. SYMINGTON

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The effect that the word cancer has and the fear engendered in most people at the thought of developing the disease is out of proportion to its incidence, since most general practitioners in this country will see only between 3 to 5 new cancer patients each year. Nevertheless, the problems inherent in diagnosing and treating the condition, and in understanding the cancer process are so great as to constitute a major challenge in biomedical science. This is particularly so when it is appreciated that cancer is not a single disease but a large number of diseases, each presenting as a different problem in cancer biology.

This review tries to look at what might be done by clinicians and biomedical scientists to meet the challenge. The material from this paper formed the basis of the 5th Annual Clowes Lecture presented at Roswell Park Memorial Institute, Buffalo, on 5th September 1977.

### Background

If we exclude cancer of skin and cervix, statistics of the National Cancer Institute (USA) of 1974 and 1977 indicate that 4 out of 6 patients with cancer today will be dead in five years. Yet, if one of the four could be diagnosed when the lesion is early and localised, the treatment which is available today could improve the five year survival to three out of six.

This distressing statement applies equally to Britain and to other medically advanced countries in the world. Trends in cancer mortality for males and females in Britain (Figures 1 and 3) show that the death rate for most tumours has changed very little in the last 40 years. The exceptions are tongue, where the fall is dramatic; oesophagus, where it is encouraging; Hodgkin's disease in the younger age groups; some childhood and rare tumours, such as choriocarcinoma, and seminoma of the testis.

The situation is particularly distressing in malignant tumours of lung, which constitute in men the highest incidence (30%) and mortality

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